

BARNES & THORNBURG

11 South Meridian Street
Indianapolis, IN 46204
(317) 236-1313
(317) 231-7433 Fax



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group: 3748

Confirmation No.: 5436

Application No.: 10/612,446

Invention: METHOD AND APPARATUS FOR
ADVANCING AIR INTO A FUEL
REFORMER BY USE OF A
TURBOCHARGER

Applicant: Dennis A. Kramer

Filed: July 2, 2003

Attorney

Docket: 9501-72886

Examiner: Unknown

Certificate Under 37 CFR 1.8(a)

I hereby certify that this correspondence is being
deposited with the United States Postal Service with
sufficient postage as first class mail in an envelope
addressed to Commissioner for Patents, P.O. Box
1450, Alexandria, VA 22313-1450

on

10/31/03

(Signature)

Karla I. Mays

Karla I. Mays

(Printed Name)

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This statement is filed in the application identified above pursuant to 37 C.F.R. § 1.56. This statement supplements an electronic statement filed on October 31, 2003, which cited one hundred eighteen (118) U.S. patent references. No representation is intended that a complete search has been made of the prior art or that no better art references than listed below are available. A copy of each reference is provided for review by the Examiner. The filing of this Statement shall not be construed to be an admission that the information cited in the Statement is, or is considered to be, material to patentability as defined in §1.56(b).

Please charge any fees that might be due in connection with this Supplemental Information Disclosure Statement to our Deposit Account No. 10-0435. An extra copy of this Supplemental Information Disclosure Statement is enclosed for that purpose.

Respectfully submitted,

BARNES & THORNBURG

A handwritten signature in black ink, appearing to read "Shawn D. Bauer", written over a horizontal line.

Shawn D. Bauer
Attorney Reg. No. 41,603

SDB/kim
Indianapolis, IN
(317) 231-7313

Sheet 1 of 8

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 9501-72886	SERIAL NO. 10/612,446
	APPLICANT Dennis A. Kramer	
	FILING DATE July 2, 2003	GROUP 3748

U.S. PATENT DOCUMENTS

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes No
	AL	WO 00/26518A1	May 11, 2000	PCT			X
	AM	WO 01/14702 A1	Mar. 1, 2001	PCT			X
	AN	WO 01/14698 A1	Mar. 1, 2001	PCT			X
	AO	WO 01/33056 A1	May 10, 2001	PCT			X
	AP	WO 94/03263A1	Feb. 17, 1994	PCT			X

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	AR	Jahn, "Physics of Electric Propulsion", pp. 126-130 (1968).
	AS	Belogub et al., "Petrol-Hydrogen Truck With Load-Carrying Capacity 5 Tons", Int. J. Hydrogen Energy, Vol. 16, No. 6, pp. 423-426 (1991).
	AT	Breshears et al., "Partial Hydrogen Injection Into Internal Combustion Engines", Proceedings of the EPA 1 st Symposium on Low Pollution Power Systems and Development, pp. 268-277 (October 1973).
	AU	Chuveliov et al., "Comparison of Alternative Energy Technologies Utilizing Fossil Fuels and Hydrogen Based on Their Damage to Population and Environment in the USSR and East Europe", pp. 269-300.
	AV	Correa, "Lean Premixed Combustion for Gas-Turbines: Review and Required Research", PD-Vol. 33, Fossil Fuel Combustion, ASME, pp. 1-9 (1991).
	AW	Czernichowski et al., "Multi-Electrodes High Pressure Gliding Discharge Reactor and its Applications for Some Waste Gas and Vapor Incineration", pp. 1-13 (1990).
	AX	Das, "Exhaust Emission Characterization of Hydrogen-Operated Engine System: Nature of Pollutants and their Control Techniques", Int. J. Hydrogen Energy, Vol. 16, No. 11, pp. 765-775 (1991).
	AY	Das, "Hydrogen Engines: A View of the Past and a Look into the Future", Int. J. of Hydrogen Energy, Vol. 15, No. 6, pp. 425-443 (1990).

Examiner

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

BASED ON FORM PTO 1449

Sheet 2 of 8

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 9501-72886	SERIAL NO. 10/612,446
	APPLICANT Dennis A. Kramer	
	FILING DATE July 2, 2003	GROUP 3748

U.S. PATENT DOCUMENTS

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	BA						
	BB						
	BC						
	BD						
	BE						
	BF						
	BG						
	BH						
	BI						
	BJ						
	BK						

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes No
	BL	WO 96/24441A2	Aug. 15, 1996	PCT			X
	BM	WO 98/45582A1	Oct. 15, 1998	PCT			X
	BN	WO 95/06194A1	Mar. 2, 1995	PCT			X
	BO	WO 85/00159A1	Jan. 17, 1985	PCT			X
	BP	EP 0485922A1	May 20, 1992	EPO			X(Abstract Only)

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	BR	Das, "Fuel Induction Techniques for a Hydrogen Operated Engine", Int. J. of Hydrogen Energy", Vol. 15, No. 11, pp. 833-842 (1990).
	BS	DeLuchi, "Hydrogen Vehicles: An Evaluation of Fuel Storage, Performance, Safety, Environmental Impacts and Cost", Int. J. Hydrogen Energy, Vol. 14, No. 2, pp. 81-130 (1989).
	BT	Duclos et al., "Diagnostic Studies of a Pinch Plasma Accelerator", AIAA Journal, Vol. 1, No. 11, pp. 2505-2513 (November 1963).
	BU	Feucht et al., "Hydrogen Drive for Road Vehicles - Results from the Fleet Test Run in Berlin", Int. J. Hydrogen Energy, Vol. 13, No. 4, pp. 243-250 (1988).
	BV	Finegold et al., "Dissociated Methanol as a Consumable Hydride for Automobiles and Gas Turbines", Proceedings of the 4 th World Hydrogen Energy Conference, Vol. 3, pp. 1359-1369 (June 13-17, 1982).
	BW	Hall et al., "Initial Studies of a New Type of Ignitor: The Railplug" - Paper 912319, pp. 1730-1746 (1991).
	BX	Houseman et al., "Hydrogen Engines Based On Liquid Fuels, A Review", G.E., Proc., 3 rd World Hydrogen Energy Conf., pp. 949-968 (1980).
	BY	Houseman, et al., "Two Stage Combustion for Low Emissions Without Catalytic Converters", Society of Automobile Engineering Meeting, SAE Paper 760759, pp. 1-9 (October 18-22, 1976).
	BZ	Jones, et al., "Exhaust-Gas Reforming of Hydrocarbon Fuels", Society of Automotive Engineers, Paper 931086, pp. 223-234 (1993).

Examiner	Date Considered
----------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.
Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

BASED ON FORM PTO 1449



Sheet 4 of 8

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 9501-72886	SERIAL NO. 10/612,446
	APPLICANT Dennis A. Kramer	
	FILING DATE July 2, 2003	GROUP 3748

U.S. PATENT DOCUMENTS

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	DA						
	DB						
	DC						
	DD						
	DE						
	DF						
	DG						
	DH						
	DI						
	DJ						
	DK						

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes No
	DL	DE 19510804A1	Sep. 26, 1996	Germany			X(Abstract Only)
	DM	DE 19757936A1	Jul. 8, 1999	Germany			X(Abstract Only)
	DN	DD 237120A1	Jul. 2, 1986	Germany (East)			X(Abstract Only)
	DO	DE 3048540A1	Jul. 22, 1982	Germany			X(Abstract Only)
	DP	GB 1221317	Feb. 3, 1971	United Kingdom			X(Abstract Only)

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	DR	Rabinovich et al., "Plasmatron Internal Combustion Engine System for Vehicle Pollution Reduction", Int. J. of Vehicle Design, Vol. 15, Nos. 3/4/5, pp. 234-242 (1994).
	DS	Scott et al., "Hydrogen Fuel Breakthrough with On-Demand Gas Generator", 372 Automotive Engineering, Vol. 93, No. 8, pp. 81-84 (Aug. 1985).
	DT	Shabalina et al., "Slag Cleaning by Use of Plasma Heating", pp. 1-7.
	DU	Handbook of Thermodynamic High Temperature Process Data, "Conversion of Hydrocarbons and Production of Reducing Gases in the C-H-O and C-H-O-N Systems", Chapter Nine, pp. 507-547.
	DV	Varde et al., "Reduction of Soot in Diesel Combustion with Hydrogen and Different H/C Gaseous Fuels", Hydrogen Energy Progress V, pp. 1631-1639.
	DW	Wang et al., "Emission Control Cost-Effectiveness of Alternative-Fuel Vehicles", Society of Automotive Engineers, Paper 931786, pp. 91-122 (1993).
	DX	Wilson, "Turbine Cars", Technology Review, pp. 50-56 (February/March, 1995).
	DY	Kirwan et al., "Fast Start-Up On-Board Gasoline Reformer for Near Zero Emissions in Spark-Ignition Engines", Society of Automotive Engineers 2002 World Congress, Paper No. 2002-01-1011, 14 pgs. (March 4-7, 2002).
	DZ	Kirwan et al., "Development of a Fast Start-up O Gasoline Reformer for Near Zero Spark-Ignition Engines", Delphi Automotive Systems, pp. 1-21 (2001).

Examiner	Date Considered
----------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.
Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 9501-72886	SERIAL NO. 10/612,446
	APPLICANT Dennis A. Kramer	
	FILING DATE July 2, 2003	GROUP 3748

U.S. PATENT DOCUMENTS

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	DA						
	DB						
	DC						
	DD						
	DE						
	DF						
	DG						
	DH						
	DI						
	DJ						
	DK						

FOREIGN PATENT DOCUMENTS

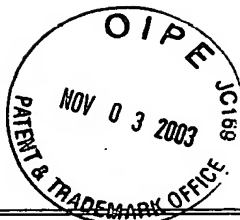
		Document Number	Date	Country	Class	Subclass	Translation Yes No
	DL	DE 19510804A1	Sep. 26, 1996	Germany			X(Abtract Only)
	DM	DE 19757936A1	Jul. 8, 1999	Germany			X(Abtract Only)
	DN	DD 237120A1	Jul. 2, 1986	Germany (East)			X(Abtract Only)
	DO	DE 3048540A1	Jul. 22, 1982	Germany			X(Abtract Only)
	DP	GB 1221317	Feb. 3, 1971	United Kingdom			X(Abtract Only)

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	DR	Rabinovich et al., "Plasmatron Internal Combustion Engine System for Vehicle Pollution Reduction", Int. J. of Vehicle Design, Vol. 15, Nos. 3/4/5, pp. 234-242 (1994).
	DS	Scott et al., "Hydrogen Fuel Breakthrough with On-Demand Gas Generator", 372 Automotive Engineering, Vol. 93, No. 8, pp. 81-84 (Aug. 1985).
	DT	Shabalina et al., "Slag Cleaning by Use of Plasma Heating", pp. 1-7.
	DU	Handbook of Thermodynamic High Temperature Process Data, "Conversion of Hydrocarbons and Production of Reducing Gases in the C-H-O and C-H-O-N Systems", Chapter Nine, pp. 507-547.
	DV	Varde et al., "Reduction of Soot in Diesel Combustion with Hydrogen and Different H/C Gaseous Fuels", Hydrogen Energy Progress V, pp. 1631-1639.
	DW	Wang et al., "Emission Control Cost-Effectiveness of Alternative-Fuel Vehicles", Society of Automotive Engineers, Paper 931786, pp. 91-122 (1993).
	DX	Wilson, "Turbine Cars", Technology Review, pp. 50-56 (February/March, 1995).
	DY	Kirwan et al., "Fast Start-Up On-Board Gasoline Reformer for Near Zero Emissions in Spark-Ignition Engines", Society of Automotive Engineers 2002 World Congress, Paper No. 2002-01-1011, 14 pgs. (March 2002).
	DZ	Kirwan et al., "Development of a Fast Start-up O Gasoline Reformer for Near Zero Spark-Ignition Engines", Delphi Automotive Systems, pp. 1-21 (2001).

Examiner	Date Considered
----------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.
Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Sheet 5 of 8

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 9501-72886	SERIAL NO. 10/612,446
	APPLICANT Dennis A. Kramer	
	FILING DATE July 2, 2003	GROUP 3748

U.S. PATENT DOCUMENTS

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	EA						
	EB						
	EC						
	ED						
	EE						
	EF						
	EG						
	EH						
	EI						
	EJ						
	EK						

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes No
	EL	GB 355210	Feb. 17, 1930	United Kingdom			X
	EM	GB 2241746A	Sep. 11, 1991	United Kingdom			X
	EN	JP 05231242A2	Sept. 7, 1993	Japan			X(Abstract Only)
	EO	JP 07292372A2	Nov. 7, 1995	Japan			X(Abstract Only)
	EP	JP 02121300A2	May 9, 1990	Japan			X(Abstract Only)

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	ER	Chandler, "Device May Spark Clean-Running Cars", The Boston Globe, p. E1, 2 pgs. (July 12, 1999).
	ES	Simanaitis, "Whither the Automobile?", Road and Track, pp. 98-102 (September 2001).
	ET	Shelef et al., "Twenty-five Years after Introduction of Automotive Catalysts: What Next?" Catalysis Today 62, pp. 35-50 (2000).
	EU	Stokes et al., "A Gasoline Engine Concept for Improved Fuel Economy - The Lean Boost System", International Falls Fuels and Lubricants Meeting and Exposition, SAE Technical Paper Series, 14 pgs. (October 16-19, 2000).
	EV	Tachtler et al., "Fuel Cell Auxiliary Power Unit - Innovation for the Electric Supply of Passenger Cars?", Society of Automotive Engineers, Paper No. 2000-01-0374, pp. 109-117 (2000).
	EW	Bromberg et al., "Experimental Evaluation of SI Engine Operation Supplemented by Hydrogen Rich Gas from a Compact Plasma Boosted Reformer", Massachusetts Institute of Technology Plasma Science and Fusion Center Report, JA-99-32, 9 pgs. (1999).
	EX	Bromberg et al., "Compact Plasmatron-Boosted Hydrogen Generation Technology for Vehicular Applications", Int. J. of Hydrogen Energy 24, pp 341-350 (1999).

Examiner	Date Considered
----------	-----------------

*EXAMINER: Initial if reference considered; whether or not citation is in conformance with MPEP 609.
Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 6 of 8U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
9501-72886SERIAL NO.
10/612,446APPLICANT
Dennis A. KramerFILING DATE
July 2, 2003GROUP
3748

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

U.S. PATENT DOCUMENTS

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	FA						
	FB						
	FC						
	FD						
	FE						
	FF						
	FG						
	FH						
	FI						
	FJ						
	FK						

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes No
	FL	JP 5127630 A2	May 25, 1993	Japan			X(Abstract Only)
	FM	SU 1519762A1	Nov. 7, 1989	Soviet Union			X(Abstract Only)
	FN	GB 1014498	Dec. 31, 1965	United Kingdom			X
	FO	GB 2188559A	Oct. 7, 1987	United Kingdom			X
	FP	DE 3337903A1	May 9, 1985	Germany			X

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	FR	Bromberg et al., "Emissions Reductions Using Hydrogen from Plasmatron Fuel Converters", Int. J. of Hydrogen Energy 26, pp. 1115-1121 (2001).
	FS	Burch et al., "An Investigation of the NO/H ₂ /O ₂ Reaction on Noble-Metal Catalysts at Low Temperatures Under Lean-Burn Conditions," Applied Catalysis B: Environmental 23, pp. 115-121 (1999).
	FT	Costa et al., "An Investigation of the NO/H ₂ /O ₂ (Lean De-NO _x) Reaction on a Highly Active and Selective Pt/La _{0.7} Sr _{0.2} Ce _{0.1} FeO ₃ Catalyst at Low Temperatures", Catalysis 209, pp. 456-471 (2002).
	FU	Frank et al., "Kinetics and Mechanism of the Reduction of Nitric Oxides by H ₂ Under Lean-Burn Conditions on a Pt-Mo-Co/α-Al ₂ O ₃ Catalyst", Applied Catalysis B: Environmental 19, pp. 45-57 (1998).
	FV	Gore, "Hydrogen A Go-Go", Discover, pp. 92-93, (July, 1999).
	FW	Koebel et al., "Selective Catalytic Reduction of NO and NO ₂ at Low Temperatures", Catalysis Today 73, pp. 239-247 (2002).
	FX	Nanba et al., "Product Analysis of Selective Catalytic Reduction of NO ₂ with C ₂ H ₄ Over H-Ferrierite", Journal of Catalysis 211, pp. 53-63 (2002).
	FY	
	FZ	

Examiner

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

BASED ON FORM PTO 1449

Sheet 7 of 8

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 9501-72886	SERIAL NO. 10/612,446
	APPLICANT Dennis A. Kramer	
	FILING DATE July 2, 2003	GROUP 3748

U.S. PATENT DOCUMENTS

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	GA						
	GB						
	GC						
	GD						
	GE						
	GF						
	GG						
	GH						
	GI						
	GJ						
	GK						

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes No
	GL	EP 0382434A2	Aug. 16, 1990	EPO			X
	GM	GB 2188559A	Oct. 7, 1987	United Kingdom			X
	GN	WO 96/27078A1	Sept. 6, 1996	PCT			X
	GO	JP 54-74419	June 12, 1979	Japan			X
	GP	JP 9079024A2	March 25, 1997	Japan			X(Abtract Only)

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	GR	
	GS	
	GT	
	GU	
	GV	
	GW	
	GX	
	GY	
	GZ	

Examiner	Date Considered
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

BASED ON FORM PTO 1449

Sheet 8 of 8

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 9501-72886	SERIAL NO. 10/612,446
	APPLICANT Dennis A. Kramer	
	FILING DATE July 2, 2003	GROUP 3748

U.S. PATENT DOCUMENTS

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	HA						
	HB						
	HC						
	HD						
	HE						
	HF						
	HG						
	HH						
	HI						
	HJ						
	HK						

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes No
	HL	DE 19927518A1	Jan. 18, 2001	Germany			X(Abstract Only)
	HM	EP 1057998A1	May 5, 2000	EPO			X(Abstract Only)
	HN	JP 3-195305	Aug. 26, 1991	Japan			X(Abstract Only)
	HO						
	HP						

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	HR	
	HS	
	HT	
	HU	
	HV	
	HW	
	HX	
	HY	

Examiner	Date Considered
----------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.
Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

BASED ON FORM PTO 1449